Assembly, Integration, and Evolution

Description

Raises awareness about the essential technical and business issues that must be addressed during assembly, integration, and evolution to achieve and maintain a high degree of system-wide assurance of security and survivability.

Overview Articles

Name	Version Creation Time	Abstract
Assembly, Integration, and Evolution Overview	1/6/10 2:51:41 PM	The objective of the Assembly, Integration & Evolution content area is to raise awareness about the essential technical, business, and individual user issues that must be addressed during assembly, integration, and evolution to achieve and maintain a high degree of system-wide assurance of security and survivability.

Most Recently Updated Articles [Ordered by Last Modified Date]

Name	Version Creation Time	Abstract
Application Firewalls and Proxies - Introduction and Concept of Operations	3/1/10 3:32:21 PM	Practices that could significantly improve application security by integrating knowledge about an application's specific security needs into elements of the IT security infrastructure are often overlooked. This document describes one of the many potential topic areas involving the integration of business applications into a supporting IT security infrastructure. Application firewalls attempt to use application-specific knowledge to improve the perimeter defense that the security infrastructure provides.
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Trustworthy Composition: The System Is Not Always the Sum of Its Parts	11/14/08 9:23:23 AM	This document surveys several of the profound technical problems and challenges faced by practitioners in the assembly and integration of secure and survivable systems.
Security Concepts, Challenges, and Design Considerations for Web Services Integration	11/14/08 9:22:13 AM	Security risks are inherent in all integration technologies. The emergence of web services as an integration pattern presents new threats and opportunities for a system's security. Beyond the initial hype, where web services were viewed as a security pandemic, lie both real risks and new security paradigms.
Identity in Assembly and Integration	11/14/08 9:21:08 AM	Securely integrating a shared service across highly distributed software systems presents a significant challenge at every phase of the software development life cycle. Moreover, there is a crucial need within the project team(s) for common abstractions and a common understanding of all the relevant aspects of a shared service. This document discusses the issues and necessary abstractions related to integrating identity services, which are particularly critical as the basis for granting or denying access to system resources and data.

All Articles [Ordered by Title]

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Assembly and Integration Case Study: Enterprise Patch Management	11/14/08 9:17:27 AM	Successfully managing the inevitable changes to an enterprise-wide application is a key aspect of assembly and integration. "If these changes aren't properly managed across platforms and throughout each of the stages of the software development life cycle, production failures, including security problems, can result." This document presents a case study of a Fortune 500 company where deficiencies in patch management left many of the company's servers vulnerable to cyber attack and subsequent infection by the Slammer worm.
Evolutionary Design of Secure Systems - The First Step Is Recognizing the Need for Change	11/14/08 9:20:08 AM	In the absence of countermeasures, a system's security and survivability will degrade over time. Ensuring that you can effectively evolve the capabilities of a system in response to a changing risk environment is an essential aspect of systems design. Successful evolutionary design is dependent on the continual monitoring of the system and its environment to detect changes that can affect the risk management assumptions on which the system's security and survivability are founded.
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